



## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2021-0794; Project Identifier AD-2021-00400-T]

RIN 2120-AA64

**Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to adopt a new airworthiness directive (AD) for certain The Boeing Company Model 747-400, -400D, and -400F series airplanes. This proposed AD was prompted by reports of burned Boeing Material Specification (BMS) 8-39 urethane foam, and a report from the airplane manufacturer that airplanes were assembled with seals throughout various areas of the airplane (including flight deck and cargo compartments) made of BMS 8-39 urethane foam, a material with fire-retardant properties that deteriorate with age. This proposed AD would require replacing the system tube/wire seals made of BMS 8-39 urethane foam in certain areas of the airplane. The FAA is proposing this AD to address the unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0794.

### **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0794; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

**FOR FURTHER INFORMATION CONTACT:** Julie Linn, Aerospace Engineer, Cabin Safety and Environmental Systems Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3684; email: [julie.linn@faa.gov](mailto:julie.linn@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0794; Project Identifier AD-2021-00400-T” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

### **Confidential Business Information**

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Julie Linn, Aerospace Engineer, Cabin Safety and Environmental Systems Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax:

206-231-3684; email: julie.linn@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

## **Background**

The FAA has received reports of burned BMS 8-39 urethane foam, and a report from the airplane manufacturer that airplanes were assembled with seals throughout various areas of the airplane (including flight deck and cargo compartments) made of BMS 8-39 urethane foam, a material with fire-retardant properties that deteriorate with age. The fire retardants in BMS 8-39 urethane foam are mixed into, but are not chemically connected with, the remaining components of the foam, which causes the fire retardants to have decreased fire resistance over time. The degraded material can be an unacceptable fuel source for a fire if exposed to an ignition source. This condition, if not addressed, could result in failure of the urethane seals to maintain sufficient Halon concentrations in the cargo compartments to extinguish or contain fire or smoke, and to prevent penetration of fire or smoke in areas of the airplane that are difficult to access for fire and smoke detection or suppression.

## **Related AD**

The FAA issued AD 2013-11-04, Amendment 39-17464 (78 FR 33193, June 4, 2013) (AD 2013-11-04), which applies to certain The Boeing Company Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, and 747SP series airplanes; Model 767-200, -300, -300F, and -400ER series airplanes; and Model 777-200, -200LR, -300, and -300ER series airplanes. AD 2013-11-04 requires replacing certain seals made of BMS 8-39 urethane foam. AD 2013-11-04 was prompted by operator or in-service reports of burned BMS 8-39 urethane foam, and a report from the airplane manufacturer indicating that airplanes were assembled, throughout various areas of the airplane (including flight deck and cargo

compartments), with seals made of BMS 8-39 urethane foam, a material with fire-retardant properties that deteriorate with age.

#### **Actions Since AD 2013-11-04 was Issued**

Since AD 2013-11-04 was issued, the FAA has determined that additional replacements of system tube/wire seals made of BMS 8-39 urethane foam are necessary for certain Model 747-400, -400D, and -400F series airplanes. These new proposed actions apply only to certain airplanes and would not replace or terminate the actions required by AD 2013-11-04.

#### **FAA's Determination**

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

#### **Related Service Information under 1 CFR Part 51**

The FAA reviewed Boeing Special Attention Service Bulletin 747-25-3381, Revision 3, dated February 19, 2021. This service information specifies procedures for replacing BMS 8-39 urethane foam seals with BMS 1-68 silicone foam rubber seals (including doing a general visual inspection of the foam for any tube or wire penetrations and sealing any penetrations that go through the insulation blankets). This service information adds the work instructions for Group 11, Configuration 2; Group 13 and 14, Configuration 4; and Group 16, 17, and 19, Configuration 5 airplanes.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

#### **Proposed AD Requirements in this NPRM**

This proposed AD would require accomplishing the actions specified in the service information already described. For information on the procedures and compliance

times, see this service information at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0794.

### **Costs of Compliance**

The FAA estimates that this AD, if adopted as proposed, would affect 131 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

#### **Estimated costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Replacement (including GVI)	Up to 32 work-hours X \$85 per hour = Up to \$2,720	\$*	Up to \$2,720	Up to \$356,320

\*The FAA has received no definitive data on which to base the parts cost estimates for this proposed AD.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a

substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Would not affect intrastate aviation in Alaska, and

(3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**The Boeing Company:** Docket No. FAA-2021-0794; Project Identifier

AD-2021-00400-T.

#### **(a) Comments Due Date**

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to The Boeing Company Model 747-400, -400D, and -400F series airplanes, certificated in any category, identified as Group 11, Configuration 2; Group 13 and 14, Configuration 4; and Group 16, 17, and 19, Configuration 5, in Boeing Special Attention Service Bulletin 747-25-3381, Revision 3, dated February 19, 2021.

**(d) Subject**

Air Transport Association (ATA) of America Code 25, Equipment/Furnishings.

**(e) Unsafe Condition**

This AD was prompted by reports of burned Boeing Material Specification (BMS) 8-39 urethane foam, and a report from the airplane manufacturer that airplanes were assembled with seals throughout various areas of the airplane (including flight deck and cargo compartments) made of BMS 8-39 urethane foam, a material with fire-retardant properties that deteriorate with age. The FAA is issuing this AD to prevent failure of the urethane seals to maintain sufficient Halon concentrations in the cargo compartments to extinguish or contain fire or smoke, and to prevent penetration of fire or smoke in areas of the airplane that are difficult to access for fire and smoke detection or suppression.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) BMS 8-39 Urethane Foam Seal Replacements**

Within 72 months after the effective date of this AD: Replace the BMS 8-39 urethane foam seals in the forward cargo compartment system tube/wire (including doing a general visual inspection of the foam for any tube or wire penetrations and sealing any penetrations that go through the insulation blankets) with BMS 1-68 silicone foam rubber seals, as applicable, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-25-3381, Revision 3, dated February 19, 2021.



#### **(h) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in Related Information. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

#### **(i) Related Information**

(1) For more information about this AD, contact Julie Linn, Aerospace Engineer, Cabin Safety and Environmental Systems Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3684; email: julie.linn@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the

FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St.,  
Des Moines, WA. For information on the availability of this material at the FAA, call  
206-231-3195.

Issued on September 16, 2021.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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